

A guide to **SUTVIVING** the next big quake or fire









Disasters will strike. Will you be ready?

California has counted over 300 disaster declarations since the federal government began using the designation in 1953. That's more than any other state.

Quakes, fires and floods top the disaster list. Researchers say climate change is becoming an increasing part of the picture, with warmer temperatures inducing longer heat waves, prolonged periods of drought and storms packed with additional moisture.

Emergency experts say that while few people have a strategy, a little planning can make a big difference in how you and your loved ones weather the unexpected.

You can't know when the next big disaster will hit, but this guide will help you prepare.

▼ To download the guide, go to sfchronicle.com/survival

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Have emergency kits ready

Packaged kits are available from retailers, but if you assemble your own, here's the minimum you should have in it, according to the Red Cross. For the car, the gear is best placed tightly into a small backpack to save space. At home, a basic outdoor garbage can works best for storage.

For the car

Water: A three-day supply amounting to 1 gallon per person per day.

Food: A three-day supply, about 1,000 calories — something light-weight like energy bars

Water purification tablets, or a water filter in case you go beyond three days and need to find alternate sources of water.

Portable radio

Flashlight and/or light stick

Charger for cell phones and devices, powered by batteries, along with a cell phone charger cord for the car

Batteries

Blankets: Emergency survival models are compact and light

Tube tent

Sanitation and personal hygiene supplies, including toilet paper

Leatherman-style multitool or pocketknife with can opener, screwdriver heads and knife blade

Poncho or other rain gear

Candles

Waterproof matches

50 feet of rope (3/16 or bigger)

Duct tape

Work gloves

First-aid kit

Sewing kit

Whistle

Smoke/dust mask

Gas meter valve shut-off wrench

Instant hand warmers

For the home

All the previous items, plus:

Medications, at least a seven-day supply

Cash: Small bills and coins

Tools: Foldable shovel, hatchet, Leatherman-style multitool, screwdriver, pliers, pocketknife and can opener

Extra clothes

Battery-powered lamp

Plastic sheeting (for emergency shelter)

Paper or plastic plates, bowls and cutlery

Small cooking pot

Soap and bath towels

Copies of personal documents

Emergency contact list

Maps of the area

Other items to consider:

Additional medical supplies (hearing aids, glasses, contacts, syringes, etc.)

Baby supplies

Games and toys (for children)

Pet supplies

Two-way radios

Extra car and house keys

Scissors

Sleeping bags

Get financial, insurance documents in order

Safeguard your documents

Keep a copy of your will, trust, birth and marriage certificates, Social Security cards, insurance papers, medical information, most recent tax return, receipts for high-ticket items and other important documents in a safe deposit box. You can also scan and save them to a DVD or flash drive, which you can give to a trusted friend or family member outside the region. Another option is to save them in the cloud. For a list of vital documents: http:// bit.ly/2zqvZDy.

Break out the camera

Your insurance will pay for everything you lost — up to your policy limits — as a result of a covered "peril," such as fire or windstorm. To get reimbursed for your personal belongings, most companies require a detailed inventory of every item lost, although some will advance a portion of vour contents coverage without this list. While your house is still standing, use an online inventory or app or print a blank one from the California Department of Insurance or consumer group United Policyholders. Store it away from your home or better yet, in the cloud. At the very least, take photos or videos of everything in your home and outbuildings, including the inside of drawers, cabinets and closets.

Know your coverage

Most policies will pay for losses from fire, smoke, wind, hail, water (excluding floods), vandalism and theft. They do not cover losses caused by earthquakes and floods. Those require separate policies.

Make sure you have replacement-cost coverage. This will pay to replace your building and contents — up to your policy limits — with new ones of similar kind and quality. Avoid actual cash value policies, which pay only the depreciated value of what you lost.



THE CAMP FIRE tore through Paradise in Butte County last year. Most insurance companies require an inventory of every item lost.

It's good to have extended replacement-cost coverage, which will pay a certain amount — 20 percent or more depending on the insurer — above your policy limits. This can help pay for the surge in local building costs that often follow a widespread disaster. Also opt for building code upgrades, which will pay an amount over your policy limit to comply with new code requirements. A guaranteed replacement-cost policy will pay to replace your house no matter the cost, but these are not common and very expensive.

Since the recent wildfires, more mainstream or "admitted" insurers are not renewing policies for properties in the wildland-urban interface. Homeowners in those areas may need to seek coverage from a "non-admitted" carrier, such as those affiliated with Lloyd's of London. Also called surplus lines, these insurers are far less regulated than admitted carriers and do not participate in the California Insurance Guarantee Association, which pays claims if an admitted carrier fails.

If you can't get insurance elsewhere, contact the California Fair Plan, which provides insurance for the home or contents from fire or lightning, internal explosion and smoke. For an additional premium, you can add extended coverage (for windstorm, hail, explosions, riots, aircraft, vehicles and volcanic eruptions as well as vandalism/mischief). You can purchase a Fair Plan policy from a licensed agent or broker or contact the plan directly at 800-339-4099.

Quake and flood coverage

Your homeowners or renters insurance company can provide a National Flood Insurance Policy and a quake policy from the California Earthquake Authority. A few companies sell stand-alone earthquake insurance, and two companies have started offering private flood insurance in California. See bit.ly/2PL2mB6.



CAMP FIRE evacuee Christine Fitzsimmons keeps her dog, Sputnik, with her at the Red Cross shelter in Chico.

Make sure your pets are safe and provided for

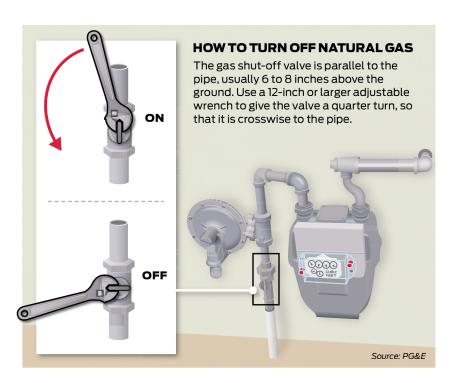
- **▶** All pets should be identified with tags and, preferably, microchips.
- ▶ In an emergency, dogs tend to bolt and cats tend to hide. Be prepared for unusual behavior. If your dog behaves erratically when Fourth of July fireworks go off, expect much more of the same during a quake or fire.
- ➤ Keep on hand a pet first-aid kit, with disinfectant, bandages, tweezers and antibiotic ointment.
- >> Store a week's worth of pet food, and peri-

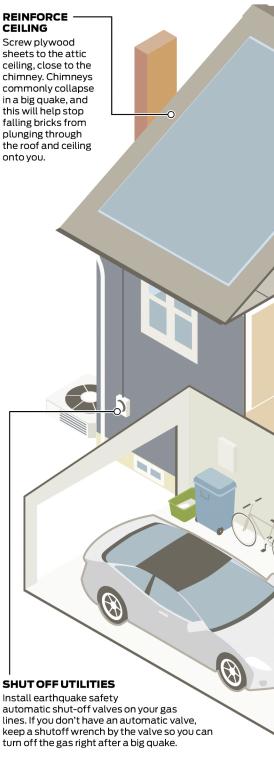
- odically check its expiration date. Canned food will keep longer than dry. Make sure to have plenty of extra water, more than you think you'll need. Pets (and people) drink more when under stress.
- >> Have bowls, leash, can opener, medicine, pet toys and plenty of cat litter, plastic bags or other cleanup gear ready to use.
- >> Train your pets to ride in a car, perhaps in a pet carrier. Remember, if you must evacuate your home, not all hotels and motels allow pets. Make a list of those near your area that do.

Safeguard your house

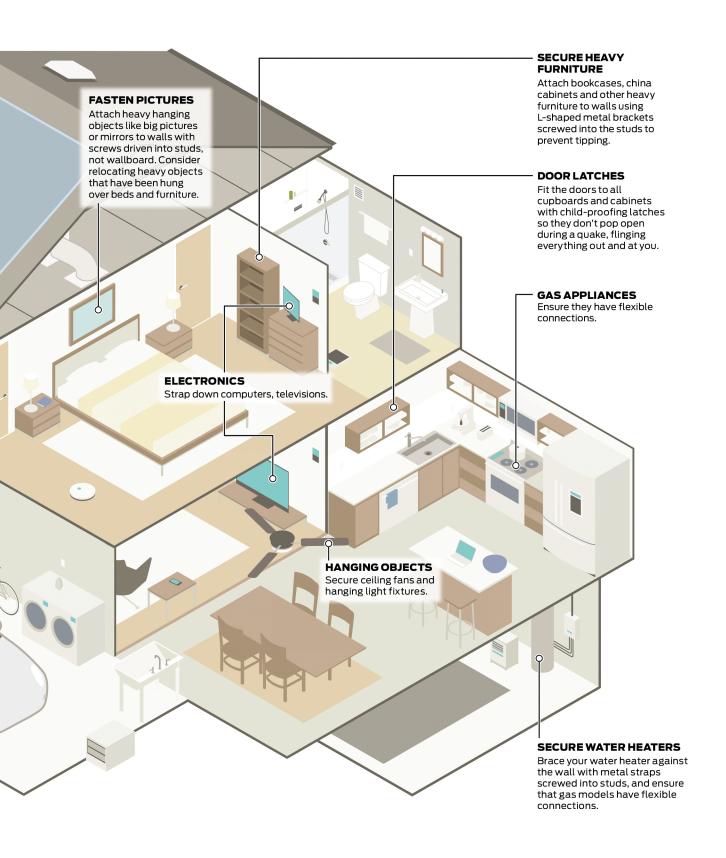
Fortify the foundation

- ▶ Secure your house to its foundation with anchor bolts, if it hasn't already been done. It will help prevent the structure from sliding off its foundation.
- ▶ Install extra wooden sheeting along the home's cripple walls those short walls in the crawl space between the foundation and floor. That will also help keep the house on its foundation.
- → If you live in a soft-story house, meaning the first floor is not well reinforced and will collapse in a big temblor, it's recommended to spend the considerable amount of money it will take to have it retrofitted. Or if you don't own the building, talk to the landlord about this. In some cases, the retrofit is required by local law.
- ➤ For a mobile home, install braces or a tie-down system underneath to keep your house from collapsing during the shaking.





Sources: Federal Emergency Management Agency, Getty Images



Know how to respond when you're at home

The national Ready Campaign says families should be able to answer these questions:

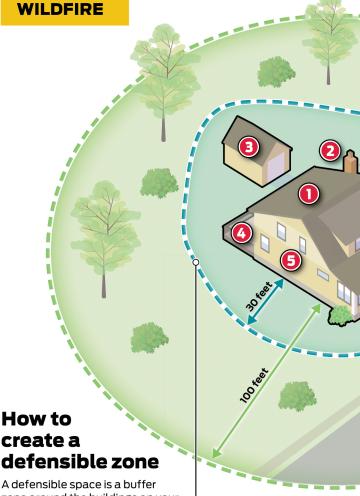
How will I receive emergency alerts and warnings?

What is my shelter plan?

What is my evacuation route?

Here are practical tips on how to prepare for an earthquake:

- **▶** Gather the family and create a plan together
- ▶ Pick safe places in each room to take cover in when the shaking begins under furniture or against an interior wall away from windows, bookcases or tall furniture that could fall. Stay away from kitchens and garages, which tend to be the most dangerous places in a home because of the objects kept there. Also, doorways are not stronger than other parts of the house, so don't rely on them for protection.
- ▶ Practice "Drop, cover and hold on" in each safe place — and schedule drills every six months.
- ➤ Conduct a "hazard hunt," looking for objects that could fall or fly through the air.
- → Put a working flashlight and shoes next to each bed.
- ➤ Teach everyone to knock on something three times repeatedly if trapped.
- **▶** Identify a safe place outside to meet after the shaking stops.
- **▶** Designate an out-of-state person for everyone to call to relay information to.
- **▶** Assign someone to turn off the gas and to gather pets.
- >> Create an earthquake kit as a family, and include one comfort item per child, like a teddy bear or toy, as well as activities or children's books.
- ➤ Talk about what to do if an earthquake happens while family members are at school or work reassuring young children that they will be safe until picked up while also creating a meeting place for adults and older children.



A defensible space is a buffer zone around the buildings on your property that can increase the chances of your home surviving a wildfire. The space is necessary to slow or stop the spread of wildfire, and it helps prevent your home from catching fire. It also protects the firefighters who may have to defend your home. For more information on how to prepare your home and yard against wildfires, go to the Cal Fire website www.readyforwildfire.org.

ZONE 1

Clear dead leaves and plants from within **30 feet** of the home. Trim tree limbs to at least 6 feet above the ground. Clear all dead limbs, leaves and other vegetation from the roof and rain gutters.

Roof

The most vulnerable part of your home, it should be made of flame-retardant materials. Homes with wood or shingle roofs are at higher risk of being destroyed in a wildfire.

Chimney

Cover it with a noncombustible screen.

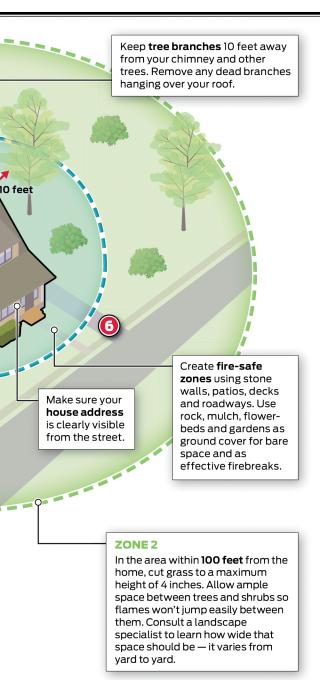
Garage

Have a fire extinguisher and tools such as a shovel, rake, bucket and hoe available for fire emergencies. Store combustible and flammable liquids away from ignition sources.

O Deck

Surfaces within 10 feet of the building should be built with ignition-resistant or noncombustible materials. Remove combustible items from underneath your deck.

Sources: California Department of Forestry and Fire Protection, Getty Images



Windows

Heat from a wildfire can break windows even before the house ignites. This allows burning embers to enter and start fires inside. Single-pane and large windows are particularly vulnerable. Install dual-pane windows with one pane of tempered glass to reduce the chance of breakage in a fire. Consider limiting the size and number of windows that face large areas of vegetation.

6 Driveway

Driveways should be built according to state and local codes to allow emergency vehicles to reach your home. Trim trees and shrubs overhanging the road to allow vehicles to pass.

Take steps to protect your property

Create a defensible zone: You don't have to strip everything down to dirt, but minimizing fuel danger is the goal. (See graphic for details.)

Avoid flammable plants: Bamboo or oily eucalyptus can light like a match head. Opt instead for high-moisture succulents such as aloe or fire-resistant hardwood trees such as maple.

Consider the weather: Don't operate any power tools to trim vegetation when the weather is hot and windy because sparks can light the yard in a twinkling.

Inspect power lines: Notify Pacific Gas & Electric Co. whenever you notice power lines brushing up against tree limbs, or close enough for a strong wind to slap them together. Its crews can come trim the trees. Several big fires, including last year's Camp Fire in Butte County, were sparked by power lines hitting vegetation or other power lines.

Roofing materials: Roofs should be made of flame-retardant materials, such as metal, asphalt composition shingles or clay tiles. Make the overhangs as wide as possible — in the Wine Country fires, some homes fared better with flying embers when they had fire-resistant overhangs of 4 feet or more to keep them from hitting the walls.

Gas valve: Know where your gas shut-off valve is, and keep a wrench next to it. If you see a wildfire getting dangerously close, shut off the gas — and any propane tanks you might have around.

Have a wildfire plan: In just two minutes, a house fire can become deadly, according to the Department of Homeland Security. In five minutes, a house can become fully engulfed in flames. Plan for the worst.

Understand your risk: Cal Fire maintains maps of areas prone to wildfire, and cities and counties are required to keep safety plans that contain procedures for evacuations and communications.



about moving

them to a safe

location early.

Sources: California

and Fire Protection,

Getty Images

Department of Forestry

Shut all windows

and doors, leaving

them unlocked.

loaded and all doors and

car keys with you.

windows closed. Carry your



MOTORISTS

flee the Camp Fire. If you need to evacuate, leave the car unlocked and the key in the ignition while you load it.

How to react in the first critical minutes

IN THE EVENT OF A FIRE

- ▶ Flee the minute calamity becomes imminent, and certainly if you are told to evacuate.
- ➤ Take your disaster kit and important documents with you.
- ▶ Back your car into an open space to load it, leaving it pointed in the direction you plan to head. While you load up, leave the car's doors unlocked and the key in the ignition.
- ▶ If the fire has hit your house before you've had time to escape, check the temperature of any doorknob you need to use before you open it. A hot knob means the flames are close on the other side of the door. Pick another exit.
- ▶ If you have to flee through a room on fire, crawl so you will be below the smoke level.
- >> Throw on a heavy coat to protect against burning embers.

IF YOU HAVE TIME AND WINDS AREN'T HIGH:

- ➤ Wet down the roof of your hose with a garden hose. But emergency officials say don't try to be a hero. They don't want to waste valuable time they could use to fight the fire to rescue you.
- ➤ To reduce or slow the spread of fire, move combustible patio furniture inside, or at least to the other side of the house from where the fire is approaching. Flaming embers will have less to ignite.

If you're trapped

Here are Cal Fire's recommended courses of action if you become trapped and can't make your way to safety.

IN YOUR CAR

- >> Stay calm.
- ▶ Park your vehicle in an area with little vegetation.
- ➤ Close all of your vehicle's windows and vents.
- ➤ Cover yourself with a wool or cotton blanket or jacket.
- >> Lie on the vehicle floor.
- ➤ Call 911 and advise rescue personnel of your location.

ON FOOT

- >> Stay calm.
- Find an area clear of vegetation

 a ditch or depression in level
 ground if possible.
- ▶ Lie face down and cover your body.
- ➤ Call 911 and advise rescue personnel of your location.

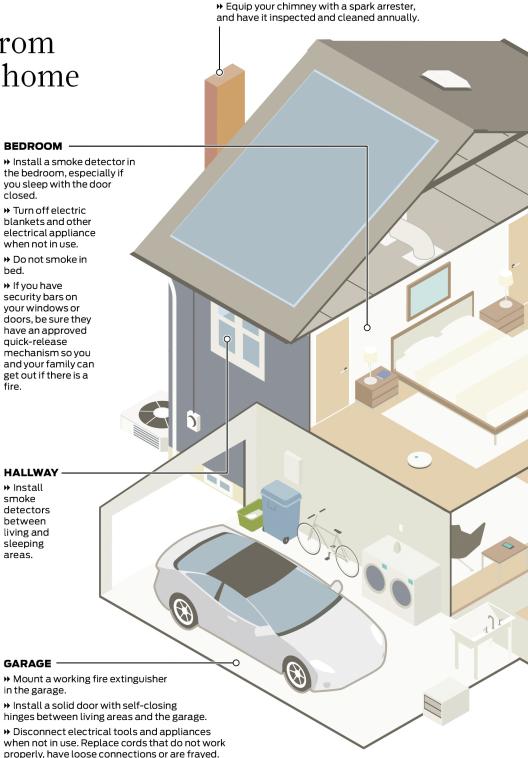
IN YOUR HOME

- ▶ Stay calm and keep your family together.
- ➤ Call 911 and advise rescue personnel of your location.
- >> Fill sinks and tubs with cold water.
- ➤ Keep doors and windows closed but unlocked.
- Stay inside the house.
- ➤ Step away from outside walls and windows.

HOUSE FIRE

Keep flames from igniting your home

- > Check the batteries in your smoke alarms once a month, and replace them twice a year. A good rule of thumb is to replace them when you change the clocks in the spring and fall.
- ➤ Get rid of old paints and other flammable liquids you don't need anymore, and store those you do in well-ventilated areas.
- ➤ Cover all outside vents with tight mesh of ½- to ¼-inch openings to prevent embers from floating inside and igniting furniture or inner walls.
- ▶ Keep a disaster kit within easy reach of the front door see the survival kit section in this guide and make sure valuable documents such as deeds, passports and insurance policies are in one handy place to grab quickly on the way out.



CHIMNEY

Sources: California Department of Forestry and Fire Protection, Getty Images

>> Disconnect appliances such as curling irons and hair dryers when done, and store them in a safe location until they are cool. >> Keep items such as towels away from wall and floor **KITCHEN** ▶ Keep a working fire extinguisher in the kitchen. → Maintain electric and gas stoves in good operating condition. >> Don't toss water on a stovetop grease fire to extinguish it. Instead, use baking soda or put a lid on the pan to suffocate the >> Turn the handles of pots and pans away from the front of the >> Install curtains and towel holders away from stove burners. Store matches and lighters out of reach of children. Make sure that electrical outlets are designed to handle appliance loads. STORAGE AREAS

- >> Dispose of oily rags in metal containers.
- ▶ Store combustibles away from ignition sources such as water heaters.
- >> Store flammable liquids in approved containers and away from ignition sources such as pilot lights.

Have a plan and practice

The majority of fire deaths — about 85% — happen in homes. Yet just 1 in 5 families has practiced getting out of their house in the event of a fire. Do you know how you'd escape from each room if a fire breaks out? If the answer is no, it's time to make a plan and practice.

- >> Walk through your home and identify exits and escape routes, making sure doors and windows can be easily opened.
- ➤ Install alarms in every room where someone sleeps.
- ➤ Keep hallways and stairs free of clutter.
- ▶ Choose a meeting place outside say the nearest stop sign or light post.
- ➤ Assign someone to get the pets.
- ▶ Practice escape routes twice a year, making the drill as realistic as possible, according to the Red Cross. The idea is to practice, not scare children, so it doesn't need to be a surprise drill. Drills should include making sure children know not to go back for toys, not to hide and not to go near the fire.
- ➤ Teach children to "get low and go." Have them practice escaping each room by crawling along the perimeter to an exit and to "stop, drop and roll" if their clothing catches fire.
- ➤ If children are fearful about fire or fire drills at school or home make them anxious, try visiting a fire station or turning the drills into games, perhaps "Simon says, 'Get low and go.'"
- >> For those in multistory homes or buildings, practice setting up and using escape ladders from a first-floor window.
- >> Not everyone may be able to get out, so family members should be taught how to insulate themselves in a room by closing doors and using towels or duct tape to seal cracks. Those who are stranded should wave a flashlight or light-colored clothing at the window so firefighters know where they are.
- >> Turn on emergency alert notification on your cell phones. This will allow you to get alerts when a vegetation or other kind of fire becomes a threat. Also, sign up for your county's emergency alert system if applicable.

Tips for finding missing loved ones

Even with the best-laid plans, family members might be unable to meet at prearranged points. Cell phones with contact information might be left behind in the rush to escape danger. Here are some tips for locating loved ones:

- ▶ Parents should ask child care providers or schools what their policy is for when a catastrophic disaster hits and whom they'll need to call if children need to be moved.
- ➤ Persistence matters. There may be several roadblocks before one contact method pans out.



Tamara Houston (left) comforts Cathy Fallon outside Fallon's home in Paradise. Fallon survived the Camp Fire while hunkering down in her home on Edgewood Lane.

- ➤ Try calling the people you're searching for during off-peak hours, when the working lines are less clogged.
- Try texting if calls aren't going through.
- ➤ Check social media Facebook, Twitter, Instagram — to see if they are online.
- ➤ Email. Even if a phone is gone, those who are missing might still be able to log on to a computer.
- ➤ Call people whom missing loved ones are close to who may know where they are.
- ➤ Check in with their neighbors, employer, school or church anywhere they usually hang out or spend time.
- For those in distant locations, try sending a snail-mail letter that has a good chance of getting forwarded if the missing person has relocated.

Stay up to date

No power, no Internet? A battery-powered radio may be your best way to get information on what's going on.

Listen for a warning siren. The city of San Francisco, for example, will blast its sirens during a major disaster, which is a cue to listen to an emergency radio broadcast. (The sirens are tested at noon every Tuesday.)

Tune in to AM radio. In the Bay Area, KGO 810, KCBS 740 and KNBR 680 carry regular news updates, and each is set up to run emergency information broadcasts from local authorities.

Consider buying an emergency radio. The radio includes channels that regular AM-FM radios don't get, including essential weather and disaster broadcasts from the National Oceanic and Atmospheric Administration. To find your local NOAA station, go to www.nws.noaa.gov/nwr.

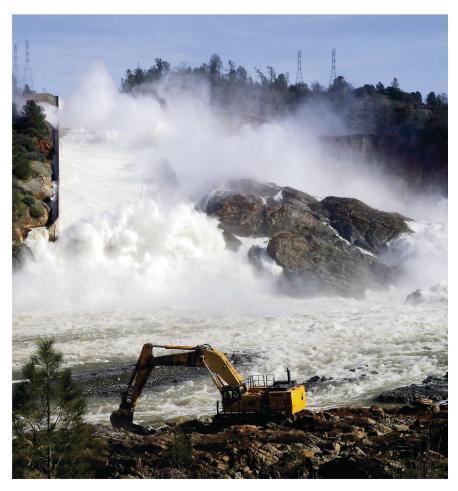
If you've managed to maintain internet service, these websites may be helpful:

- >> www.sfchronicle.com and www.sfgate.com
- ▶ U.S. Geological Service for earthquakes: https://earthquake.usgs.gov/earthquakes/map
- ➤ Cal Fire for wildfires: www.fire.ca.gov/current_incidents
- ▶ Nixle for local public safety details: www. nixle.com
- ➤ Your county government website
- >> Social media for information on friends and family.

FLOODING

What to expect after a disaster

- ▶ If your house is livable, stay in it even if the utilities are out because shelters might become overcrowded. This is where your survival kit will prove its worth, for food, water, first aid and the rest. Be prepared to go it alone for as many as three days.
- >> You may have turned off your gas, but if you smell or suspect a leak, don't light a match or a candle or flip any light switch, which can cause a spark, until you're sure the gas danger is over.
- >> Never touch a downed power line.
- >> If your home is unlivable and staying in a hotel or with relatives is not an option, go to an emergency shelter. Do so quickly so you can get situated, reconnect with family or work, and apply for aid and get in touch with your home-insurance agent.
- ▶ If you rent or decide not to replace your house, prepare to make relocation arrangements signing a new lease, getting new furniture or other belongings, applying for insurance payments or governmental emergency assistance. If you are moving back into an apartment that was only damaged, the landlord is responsible for making your unit fit to live in again but not for the loss of your personal property.
- → Take care of yourself. Consider counseling, stay healthy through exercise and good diet, stay current with your friends in other words, recognize that you've gone through an emotional wringer, and let yourself process the grief. Remember: To some extent, you will be rebuilding your life, and that comes one slow step at a time.



WATER THUNDERS over the auxiliary spillway at Oroville Dam in 2017. Tens of thousands of people who lived below the dam were evacuated as a precaution.

What to do when the water suddenly surges around you

- **▶** Seek high ground with an emergency kit if you have one.
- ▶ If time allows, secure your home before leaving. Move valuables upstairs or to higher areas, disconnect electrical appliances, tie down outside furniture and seal basement vents.
- → Consult a reliable weather source such as www.weather.gov or a weather radio about safe places to go and safe ways to get there.
- **>>** Do not walk or drive through floodwater. Most flood-related drownings occur when someone drives into high water, according to the Centers for Disease Control and Prevention. The second leading cause of drownings is walking into high water. Turn around and go the other way.
- >> Should your vehicle stall out, leave it. Don't wait on the roof. However, if the water is rushing and you have a sense that you'll be swept away, stay put.

Places to turn to for assistance

After a major disaster, you may qualify for tax relief, unemployment insurance, federal grants and low-interest loans, but it helps to act quickly. Here's where to turn:

File a claim: Contact your insurance agent as soon as possible to start a claim. If you have to move out of your house, most policies will pay for living expenses up to a certain amount of money and time. You can usually get an advance to cover temporary housing, food and other immediate needs. Some firms will give a percentage of your content coverage before you submit an inventory. If you believe your insurance company is not treating you fairly, file a complaint with the California Department of Insurance and consider hiring a public adjuster to represent you. If the treatment is egregious, consider hiring an attorney.



Federal assistance: You could be eligible for individual assistance from the Federal Emergency Management Agency if your loss is part of a federally declared disaster. FEMA can provide grants and low-interest loans to cover uninsured losses, up to certain limits. For more information: www.fema. gov/individual-disasterassistance.

Mortgage relief: If you have a mortgage, contact your loan servicer. You can usually get at least a 90day moratorium on payments and temporary relief from foreclosure activity.

waits with her grandchildren to get supplies from a makeshift evacuation center at the Walmart in Chico after the Camp Fire.

DOTTIE FLANDERS

Tax relief: If your home is damaged or destroyed, you may be eligible for property tax relief. File a claim with your county assessor's office within 12 months. The assessor can reappraise the property in its current condition and potentially refund some taxes. When you rebuild, the value of your property before it was damaged will be restored. Also check with the IRS and California Franchise Tax Board to see if they have extended taxfiling deadlines for disaster victims

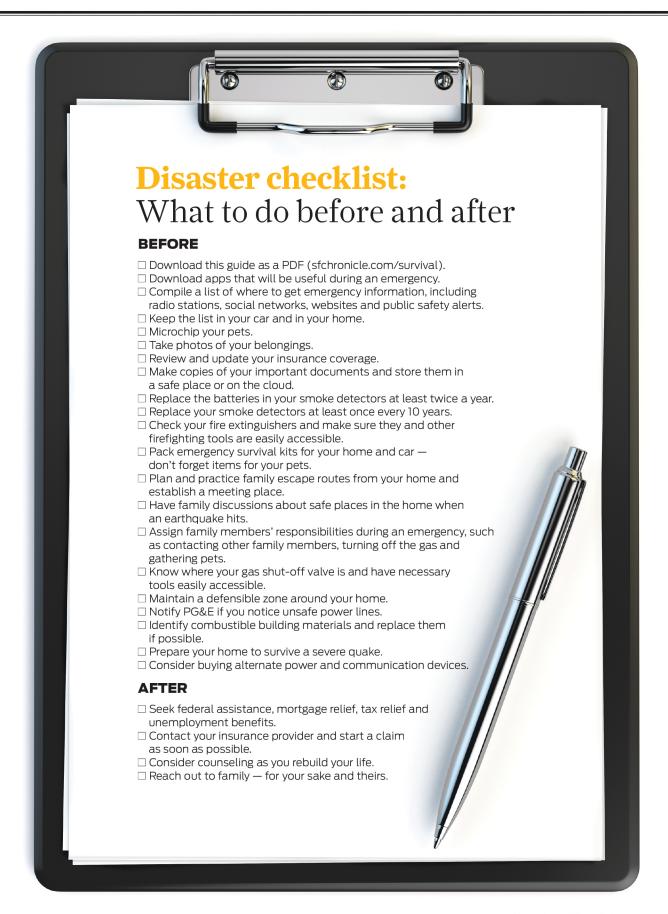
If your loss was caused by a federally declared disaster, you may be eligible to deduct casualty losses that exceed 10 percent of your adjusted gross income on your federal return, if you itemize deductions.

Unemployment benefits: If you lose your job as a direct result of a federally declared disaster and are not eligible for regular state unemployment benefits, you could qualify for up to six months of unemployment benefits from a federally funded program called Disaster Unemployment Assistance. For more information: http:// bit.ly/2A73NCO.

TOXIC SPILL

What to do if chemicals foul the air

- >> Comply with emergency orders. Consult the fire department, a reliable media source or a public safety alert system about what to do.
- >> If you're ordered to evacuate, don't panic. Let others in the building know the situation, then grab your wallet, phone and keys, as well as your emergency kit if you have one, and leave.
- >> If you're ordered to shelter in place, close exterior doors and windows and move toward the center of the building.
- >> Await further instructions before returning to your normal routine.
- >> The federal Emergency Planning and Community Right-to-Know Act, passed in 1986, requires industries to report any hazardous materials they use. If you really want to be prepared, check out the inventory lists kept by county health agencies and local fire departments.



It could happen today.

We give renters the strength to recover after a damaging earthquake.



Protect your way of life with earthquake insurance. Learn more at **EarthquakeAuthority.com**.

